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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APR 15 2002

APPLICANT: Edward L. Simonds

SERIAL NO.: 10/085,969

FILED: February 28, 2002

TITLE: FLUID PRESSURE REGULATOR

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Assistant Commissioner for Patents  
Washington, D.C. 20231

**AFFIDAVIT UNDER 37 CFR 1.98(a)(3)**

The undersigned states that the prior art patents submitted with the Information Disclosure Statement attached hereto may have relevance as it concerns the above patent application. This relevance, as presently understood by the undersigned is as follows:

JA 61-83492(A), Hiramatsu. A ring 53, being a push-up member, is mounted to the bottom of a vane containing groove 50 on one end surface site of an inner rotor 30, and the bottom surface of a vane 44 is adapted to make slide contact with the ring 53 when the forward end of the vane 55 makes slide contact with the inner peripheral surface of a cam ring 29 at the small part of the cam ring 29. This prevents the vane 44 from being moved further to the inner peripheral side of the inner rotor 30. Thus, even if a pressure difference between the forward end and the bottom part of the vane 44 is produced at the small part of the cam ring

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**CERTIFICATE OF MAILING**

I hereby certify that this Affidavit is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on this 15 day of April, 2002, with adequate postage affixed thereto.

29, since the vane 44 makes contact with the ring 53 and is prevented from being further moved to the inner side of the containing groove 50, the forward end of the vane 44 is always brought into slide contact with the inner peripheral surface, and eliminates a fear of an oil pressure being escaped due to formation of a gap. This enables stable provision of desired torque, and improves reliability of a pump.

JA 01-290924(A), Hosoyama. A guide body (g) is fixed inside a casing C and the interval between the outer peripheral edge of the guide body (g) and the inner peripheral edge (i) of the casing C is equalized. A circular rotor R and an output shaft 13 are fixed on one axis. Blades 14 provided on the rotor R are brought into contact slidingly with the inner peripheral edge (i) of the casing. Thereby, the balance of the whole engine can be kept reducing vibration.

DT 2029 280, Offenlegungsschrift. Consists of a casing with an internal cylindrical chamber, a rotor operating in this, with sliding vanes, and with casing end covers with inlet and discharge openings. The rotor is disposed centrally in the internal chamber which is divided by a partition vane mounted in a groove in the chamber wall. The chamber is further divided by movable vanes mounted in the rotor.

Respectfully submitted,

By

Brett J. Trout, Reg. No. 37,250  
300 S.W. 5th, Suite 222  
Des Moines, IA 50309  
Telephone: 280-1939  
Attorney for Applicant

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Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

## Complete if Known

Application Number	10/085,969
Filing Date	February 28, 2002
First Named Inventor	Edward L. Simonds
Art Unit	
Examiner Name	

Attorney Docket Number

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. <sup>1</sup>	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		us-5,030,074	7/9/91	Sakamaki et al	
		us-3,988,083	10/26/76	Shimizu et al	
		us-4,998,868	3/12/91	Sakamaki et al	
		us-2,636,480	4/28/53	Becker	
		US-5,011,390	4/30/91	Sakamaki et al	
		US-5,002,473	3/26/91	Sakamaki et al	
		US-6,024,549	2/15/00	Lee	
		US-5,816,789	10/6/98	Johnson	
		US-5,961,310	10/5/99	McClure	
		US-5,551,854	9/3/96	Edwards	
		US-1,492,456	4/12/23	Hansen-Ellehammer	
		US-3,804,562	4/16/74	Hansson	
		US-4,789,317	12/6/88	Waser et al	
		US-5,533,566	7/9/96	Fineblum	
		US-5,284,427	2/8/94	Wacker	
		US-2,671,411	3/9/54	Rhine	
		US-5,967,016	10/19/99	Simonds	
		US-5,974,943	11/2/99	Simonds	
		US-4,712,789	12/87	Brilando	
		US-4,757,988	07/88	Szymski	

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
?		JA 61-83.492.(A)	9/29/84	Hiramatsu		
2		JA 01-29.0924.(A)	5/18/88	Hosoyama		
2		DT 2029-280	6/13/70	Offenlegungsschrift		
2		WO 82/01215	4/15/82	Richter, Hans		
2		GB 392,999	6/1/33	Warren, et al		

Examiner Signature

Date Considered

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PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

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Substitute for form 1449A/PTO				Complete if Known	
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				Examiner Name	
Sheet	2	of	2	Attorney Docket Number	

**U.S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

<b>Examiner Signature</b>		<b>Date Considered</b>	
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